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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,668	12/29/2003	Leila Song	5017	1567
7590 12/02/2008 The Law Office of Stuart D. Frenkel, P.C. Suite 330 3975 University Drive Fairfax, VA 22030			EXAMINER AHMED, HASAN SYED	
			ART UNIT	PAPER NUMBER
			1615	
			MAIL DATE	DELIVERY MODE
			12/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/747,668

Applicant(s)

SONG ET AL.

Examiner

HASAN S. AHMED

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

- Receipt is acknowledged of applicants' appeal brief, filed on 12 September 2008.
- After further consideration, the finality of the previous Office action is withdrawn.
- Arguments in the appeal brief have been considered, but are moot in view of the new grounds of rejection.

* * * * *

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, while the specification is enabled for deodorization using sodium borohydride, it does not reasonably provide enablement for deodorization using the generic class of complex metal hydrides. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. The limitation "complex metal hydride" is broad and encompasses a large class of agents. As such, examiner respectfully submits that one of ordinary skill in the art would be faced with an undue experimental burden in attempting to practice the invention commensurate in

scope with the claims. Thus, the disclosure of the instant specification is not sufficient to support the generic concept of "complex metal hydride."

2. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, claim 1 recites a process for the deodorization of pigment derived from fish scales comprising contacting said pigment with a complex metal hydride. However, the instant specification does not disclose a process for the deodorization of a pigment using a complex metal hydride alone. Rather, the instant specification requires certain steps in the process; these include: (a) addition of a weak acid (claim 5), (b) off-gassing (claim 5), and (c) addition of weak acid no more than three hours after the mixture of pigment paste and sodium borohydride. Instant claim 1 recites none of these additional steps. Thus, claim 1, as currently constructed, is not described in the specification in a manner that conveys to a person skilled in the art that the inventors had possession of the subject matter claimed in instant claim 1.

* * * * *

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-8, 10, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 51149211 A ("Saiga") in view of JP 2003088337 A ("Hiroshi").

Saiga discloses a method of improving odor from natural sources (see English translation, page 3, last paragraph – page 4, second full-paragraph) comprising:

- the complex metal hydride, *e.g.* borohydride, of instant claim 1 (see English translation, page 4, third full-paragraph); and
- the borohydride of instant claim 4 (see English translation, page 4, third full-paragraph).

The Saiga reference discloses amines as the source of odor (see English translation, page 3, last paragraph – page 4, second full-paragraph), not the fish scales of instant claim 1, or the guanine of instant claim 2. However, amines are inherently the source of odor in guanines and fish scales (see instant specification, page 2, lines 17-19). As such, it would be obvious to a person of ordinary skill in the art having read the Saiga reference to use borohydride to deodorize amine based odors from natural sources, such as fish scales.

Saiga differs from the instant application in that it does not teach the weak acid of instant claims 5, 7, 8, and 14-17. However, the use of weak organic acids to reduce the odor of fish scale products was known in the art before the instant application was filed, as taught by Hiroshi (see paragraph 0011). Although Hiroshi does not teach the acetic acid of instant claims 8 and 17, citric acid and phosphoric acid (see paragraph 0011) are deemed to be functional equivalents of acetic acid, thus burden shifts to applicant to

show an unexpected result with the use of acetic acid in lieu of the disclosed organic acids.

The Saiga reference also differs from the instant application in that it does not teach the fish scale derived paste of instant claims 3, 14, and 15. However, Hiroshi forms a fish scale derived paste by mixing acidic water with ground fish scales (see paragraphs 0015 and 0016).

Hiroshi explains that adding weak organic acids to fish scale derived products sharply reduces the smell of fish scales (see, e.g., paragraph 0048).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose a method of reducing the odor of fish scale derived products using a complex metal hydride and a weak acid, as taught by Saiga in view of Hiroshi. One of ordinary skill in the art at the time the invention was made would have been motivated to use such a process because it is effective in reducing the odor of fish scale derived products, as explained by Hiroshi.

*

2. Claims 1, 9, and 11-13 remain rejected under 35 U.S.C. 103(a) as being unpatentable over JP 51149211 A ("Saiga") in view of JP 2003088337 A ("Hiroshi").

Saiga teaches a method of improving odor from natural sources and Hiroshi teaches a method of reducing the odor of fish scale derived products using weak organic acids (see above).

While the prior art does not explicitly teach all the instant claimed percentages, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to determine suitable percentages through routine or manipulative experimentation to obtain the best possible results, as these are variable parameters attainable within the art.

Moreover, generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456; 105 USPQ 233, 235 (CCPA 1955). Applicants have not demonstrated any unexpected or unusual results, which accrue from the instant percentage ranges.

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3. Claims 1 and 18-20 remain rejected under 35 U.S.C. 103(a) as being unpatentable over JP 51149211 A ("Saiga") in view of JP 2003088337 A ("Hiroshi"), further in view of U.S. Patent No. 4,486,334 ("Horiuchi").

Saiga teaches a method of improving odor from natural sources and Hiroshi teaches a method of reducing the odor of fish scale derived products using weak organic acids (*see above*).

Saiga and Hiroshi differ from the instant application in that they do not teach a cosmetic formulation. However, fish scale derived cosmetic formulations were known in the art before the instant application was filed, as explained by Horiuchi (*see col. 1, lines 11-31*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to disclose a cosmetic formulation derived from fish scales, as taught by Horiuchi. One of ordinary skill in the art at the time the invention was made would have been motivated to make such a formulation because it improves attractiveness of the cosmetic formulation and increases its commercial value, as explained by Horiuchi (see col. 1, lines 14-16).

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Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HASAN S. AHMED whose telephone number is (571)272-4792. The examiner can normally be reached on 9am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Woodward can be reached on (571)272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. S. A./
Examiner, Art Unit 1615

/Humera N. Sheikh/
Primary Examiner, Art Unit 1615